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ABSTRACT

This paper examines the role that colleges and universities play in the economy of rural northern New York. It is based on a 1992-93 survey of 20 of the 21 colleges and universities in the region. Parts of the survey were updated in 1997. The study found that the institutions played a vital role in assisting businesses and community organizations engaged in promoting economic development. Services provided included small business assistance, workforce and entrepreneurial development, international trade and investment assistance, total quality management, technology transfer and product development, Internet and computer services, economic research, environmental and forestry management, continuing education and training programs, assistance to community organizations, and providing conference and workshop facilities. It was also found that the nature and magnitude of the technical assistance provided by an institution depended on its degree of commitment to public service, its location and size, the diversity of its academic and other programs, and the expertise and interests of its faculty and staff. An appendix provides a list of areas of institutional strength in public service. (MDM)

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Promoting Rural Development Through Linkages with Higher Education: A Case Study of the Northern New York Economy *

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Promoting Rural Development Through Linkages with Higher Education: A Case Study of the Northern New York Economy

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Abstract: The study shows that the colleges and universities located in rural northern New York play a vital role in assisting businesses and community organizations engaged in promoting economic development. Services provided include: small business assistance, workforce and entrepreneurial development, international trade and investment assistance, total quality management, technology transfer and product development, internet and computer services, economic research, environmental and forestry management, continuing education and training programs, assistance to health, social, art and cultural organizations, and providing conference and workshop facilities. The nature and magnitude of the technical assistance provided by an institution depends on: its degree of commitment to public service; its location and size; diversity of its academic and other programs; and, finally, expertise and interests of its faculty and staff. The study clearly shows that the institutions take keen interest in improving the rural quality of life in the region. There exists a high degree of college-community interaction, and every institution is viewed as a major asset by the community in which it is located. Consequently, these institutions enjoy considerable recognition, status and prestige in the region.

The paper examines the role the colleges and universities play in the economy of rural northern New York (NNY). It is based on the results of the survey conducted in 1992-93 parts of which were updated this year. Section I provides a historical perspective of the linkage between higher education and economic development. Section II gives a socio-economic profile of the NNY economy and of the colleges and universities located in the region. Section III discusses the survey findings regarding the contributions the colleges and universities make to rural development of the region. Section IV summarizes the direct and indirect employment and expenditure impact the colleges and universities make to the communities in which they are located. Section V lists the pre-requisites for designing a meaningful community assistance program by an institution.

I. Historical Background

Institutions of higher education are often called upon to become catalysts for economic development by sharing their knowledge, expertise and other resources. The demand for higher education to become involved in economic development has increased considerably over the recent past because of the many challenges confronting the United States. The United States economy is being subjected to an increasing degree of global competition, rapid technological changes and automation, revolutionary advances in methods of communication and information processing, and increasing pressure for environmental protection.

Higher education is now being asked to do the same thing for the fast changing technological and information-based economy which the Land Grant Act of 1862 asked higher education to do for the agriculture and natural resources-based

economy during the second half of the 19th century. The 1862 Act led to the creation of the land-grant university system which "provided the basis for partnership between higher education, business, and government in the fields of agriculture and the mechanical arts."[1] That partnership transformed agriculture into a scientifically and technologically advanced sector of the economy. Agriculture as well as mining witnessed revolutionary changes in their methods of production and became highly commercialized sectors of the U.S. economy.

Laws enacted later strengthened these linkages between higher education and the economy even further. For example, the Hatch Act of 1887 provided funds for the establishment of experiment stations at the land-grant colleges where agricultural problems actually encountered could be addressed; the Smith-Lever Act of 1914 provided federal funding for the establishment of the Cooperative Extension Services; and the Smith-Hughes Act of 1917 provided federal funding for vocational training

The 1862 Land Grant Act was a pioneering piece of legislation and set a new direction for higher education. Educational institutions would no longer be seen as ivory towers aloof from and unconcerned with the social and economic issues confronting society. They would now be viewed as important contributors to improving the social and economic well-being of society at large through increased availability of their knowledge and expertise. Public service, thus, became an important mission of higher education. "The land grant model," according to Patricia Crosson, "provides a powerful and lasting model for public service, and a variety of relatively recent attempts have been made to replicate it in other areas like education, public health, and urban services."[2]

The educational institutions have taken this societal expectation seriously, and most have responded positively by making public service an important part of their educational mission. For example, in a 1980 survey conducted by Kurt Smith concerning the public service activities of the institutions belonging to the American Association of State Colleges and Universities (AASCU), 92% (234 out of 255) of the respondents indicated that they "recognized public service as an area of institutional responsibility in their mission statement. A majority (58%) of AASCU institutions described public service as one of their integral functions, together with teaching and research."[3] (AASCU, 1985) Similarly, in a 1985 survey conducted by the AASCU Task Force on Economic Development, 98 percent (294 out of 300) of AASCU institutions "indicated that they perceived new demands to play a more active role in economic development...[and] 97 percent had plans to increase their efforts in economic development."[4] (AASCU, 1986).

Similarly, responding to these public expectations, the State University of New York (SUNY) has made economic development "an integral part of SUNY's teaching, research and service missions."[5] SUNY has incorporated public service in its mission statement by proclaiming that the state university will share, "its expertise with the business, agricultural, governmental, labor and nonprofit sectors

through a program of *public service* for the purpose of enhancing the well-being of the people of the State of New York and in protecting our environment and marine resources."[6]

The colleges and universities located in the fourteen counties of NNY are no exception to this national trend. The survey results on "public service and higher education" confirm the existence of strong linkage between the colleges and universities and economic development. Each institution is actively involved in various aspects of community and regional development. Due in part to the region's primarily rural nature, institutions of higher education appear to enjoy considerable status and prestige within their communities. Each institution is considered an important economic asset and a vital resource serving the local economy. In fact, an institution of higher education is often the major source of employment in the local community and, in some cases, in the entire county as well. In general, the colleges and universities in NNY regard themselves as an integral part of their communities and take keen interest in community growth and development.

II. Profile of the NNY Region and of the Higher Education Institutions

• **Socio-Economic Profile of the Region:** The study covers the 14 counties of St Lawrence, Franklin, Clinton, Jefferson, Lewis, Herkimer, Hamilton, Essex, Oswego, Oneida, Fulton, Warren, and Washington in Northern New York, commonly known as upstate New York or the North Country. The region is bounded by the St Lawrence River in the north, Lake Ontario in the west, Lake Champlain in the east and the Mohawk River Valley in the south. The Adirondack Mountains and the adjoining forest reserve lie in the center and separate the region into two parts. The NNY region borders the Canadian provinces of Ontario and Quebec.

It is the most rural region in the state, sparsely populated, and geographically quite isolated. The population density in 1995 was about 69 people per square mile versus the state average of 384. The region's total population of about 1.24 million in 1995 was 6.8% of the state's total, but it covered 38% of the state's land area. The region generally suffers from higher incidence of unemployment and lower per capita income. The NNY average per capita income in 1994 was $17,828 as opposed to the state average income of $25,720. Because of its low level of economic growth and lack of economic opportunities, the region experiences many problems typical of a rural area. These include: higher rates of poverty and unemployment; lack of adequate infrastructure; inadequate transportation network; limited access to health care and social services; outmigration of young people; low tax base; and, finally, political fragmentation resulting in small size of local governments leading to higher costs in delivery of public services because of diseconomies of scale. The region also suffers from the effects of a harsh winter climate.

On the positive side, the region has vast natural resources in agriculture, mining, forests, lakes and waterfalls, ski and other winter sports facilities, clean air

and water, and excellent tourism opportunities. Similarly, its proximity to the rich Canadian market just across the border is considered an important asset for the area. The region, therefore, does have potential for economic growth. It is primarily because of such assessments of the economy of the region that many developers term it as the "under-developed empire of the Empire State." Promoting rural development and creating jobs are the major priorities of the region. Table 1 gives selected economic indicators of the region.

TABLE 1: SELECTED INDICATORS FOR THE NORTHERN NEW YORK REGION

County	1990 Land Area Sq. Mi.	1995 Population	1995 Population Density	1994 Per Capita Income	1994 Unmploy-ment Rate
Clinton	1,039	83,370	80.24	$16,663	7.6%
Essex	1,797	37,887	21.08	$17,844	10.1%
Franklin	1,632	49,400	30.27	$14,979	9.0%
Fulton	496	54,106	109.08	$17,694	7.7%
Hamilton	1,721	5,208	3.03	$19,292	10.9%
Herkimer	1,412	66,354	46.99	$16,543	7.1%
Jefferson	1,272	114,712	90.18	$16,103	10.1%
Lewis	1,276	27,711	21.72	$14,452	9.9%
Oneida	1,213	242,208	199.68	$18,711	5.5%
Oswego	953	125,794	132.00	$17,500	8.8%
St. Lawrence	2,686	115,482	42.99	$14,810	9.6%
Saratoga	812	194,332	239.33	$21,641	5.0%
Warren	870	61,544	70.74	$20,576	7.8%
Washington	836	61,015	72.98	$15,848	6.3%
Total/Average	**18,015**	**1,239,123**	**68.78**	**$17,828**	**7.3%**
New York State	**47,224**	**18,136,081**	**384.04**	**$25,720**	**6.9%**

SOURCES:
1. Land Area from "County and City Data Books 1994"
2. Population from "USA Counties 1996"
3. Per Capita Income from "Regional Economic Information System Data Report 1994"
4. Unemployment Rate from "USA Counties 1996"

• **Profile of the Colleges and Universities in the Region:** Despite the many economic problems confronting the region, it is, fortunately, blessed with a wide array of colleges and universities as given in Table 2. There are twenty-one colleges and universities in the region- seven private and fourteen public. Among the seven private colleges, three are two-year colleges, three four-year colleges, and one graduate institution. Similarly, among the fourteen public institutions, there are seven two-year community colleges, one two-year college of technology, three four-year colleges, one upper division and graduate institute of technology, one specialized upper division and graduate college of environmental science and

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TABLE 2: SELECTED INFORMATION ON COLLEGES AND UNIVERSITIES LOCATED IN NORTHERN NEW YORK

College / University	Year Started	County	Year	Campus Budget*	Employee FTE	Student FTE
Adirondack Community College	1961	Saratoga	1995-96	$13.3	389.0	2,366.0
Canton College of Technology	1906	St. Lawrence	1995-96	$11.8	299.0	1,745.0
Clarkson University †	1896	St. Lawrence	1995-96	$68.8	532.0	2,541.0
Clinton Community College	1969	Clinton	1995-96	$8.9	169.4	1,187.7
Empire State College	1971	Saratoga	1990-91	$18.7	347.6	4,185.0
Fulton-Montgomery Community College	1964	Fulton	1995-96	$9.7	142.5	1,433.0
Herkimer County Community College	1967	Herkimer	1995-96	$12.4	250.3	2,111.6
Jefferson Community College	1961	Jefferson	1995-96	$12.1	271.0	2,397.0
Mater Dei College †	1960	St. Lawrence	1994-95	$5.2	70.0	454.0
Mohawk Valley Community College	1946	Oneida	1994-95	$29.0	656.1	4,671.9
North Country Community College	1967	Essex	1994-95	$8.4	179.0	1,036.7
Paul Smith's College †	1937	Franklin	1995-96	$16.0	220.0	637.0
St. Lawrence University †	1856	St. Lawrence	1995-96	$62.0	579.5	1,986.0
SUC Environmental Science and Forestry	1911	St. Lawrence	1995-96	$24 - $25	333.2	1,423.0
SUNY Institute of Technology	1973	Oneida	1995-96	$24.9	307.5	1,860.0
SUNY Oswego	1861	Oswego	1994-95	$97.6	957.0	14,378.0
SUNY Plattsburgh	1889	Clinton	1994-95	$43.6	931.0	5,250.0
SUNY Potsdam	1816	St. Lawrence	1995-96	$44.0	873.0	3,994.0
Utica College of Syracuse University †	1946	Oneida	1995-96	$26.7	295.0	1,628.0
Wadhams Hall (Seminary College) †	1924	St. Lawrence	1990-91	$7.5	30.0	35.0
		TOTAL		$545.1	7,832.1	55,319.9

* all dollar figures are in millions † private institution

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forestry, and, finally, Empire State College which offers instruction through individual learning arrangements. Among the private colleges, two are religious institutions. The smallest college is Wadhams Hall with enrollment of nearly 40 students, and the largest is Mohawk Valley Community College with enrollment of over 7,500 students. These institutions differ in size and the type of academic programs and degrees offered.

The region takes pride in having several institutions which are among the oldest in the country. There are five institutions which are more than 100 years old. For example, SUNY Potsdam is the oldest institution and traces its origin to the formation of St. Lawrence Academy in the year 1816. In fact, it ranks as the 50th oldest institution in the United States. St. Lawrence University, which was established in 1856, has the distinction of being the oldest continuously coeducational institution of higher learning in New York State. SUNY Oswego is 136 years old, SUNY Plattsburgh 108 years old while Clarkson University celebrated its 100th anniversary in 1996. Some of these institutions enjoy national and international reputation

Another unique feature of the NNY institutions is that most of them were started through local community efforts. Despite the low population density and its relative geographic isolation from major population centers, having such a wide diversity of educational institutions in this rural region surprises most education planners. One observes a special kinship between the communities and the educational institutions in which they are located. The institutions are, therefore, expected to be active partners in providing solutions to the social and economic problems confronting the region.

III. Objectives of the Study and Analysis of Survey Results:

This study is a part of a comprehensive research project and was originally conducted in 1992. However, certain parts of the study were updated this year. A survey questionnaire on the nature and magnitude of each institution's involvement in public service was mailed to presidents of 21 colleges and universities in NNY. Needless to emphasize, public service provides an important link between an academic institution and the outside community. It is through this linkage that the colleges and universities participate in community activities designed to enhance the social and economic well being of the local communities.

The presidents were requested to have the survey completed by staff members knowledgeable about the public service programs at the institution. The institutions were encouraged to send supporting documents such as mission statements; college catalogs; brochures describing special institutes and centers; directories of public service activities; annual reports; brochures on conferences, workshops and training programs and studies on the economic impact of their institutions.

The survey instrument contained 32 items on various aspects of public service. Key areas covered included: (1) nature and magnitude of technical and other community assistance provided and the type of organizations using those services; (2) institutional organizational structure to deliver public service programs; (3) areas of expertise and interests of faculty and staff; (4) names and addresses of faculty and staff who could be contacted by external groups needing technical assistance; (5) nature of institution's interaction with community leaders and organizations; (6) reasons for engaging in public service; (7) factors inhibiting public service involvement; (8) and, finally, institution's economic impact on the local economy.

Of the twenty-one colleges and universities, twenty returned the completed questionnaire (95% response rate). The quality of information provided varied considerably among the institutions. Since public service activities at an institution are carried out by many departments and individuals, it was not easy to obtain information on every activity undertaken. In some instances, there was no record keeping of the services provided. For that reason, some institutions had a difficult time providing complete information to many of the questions in the survey. However, each institution provided the name of a person who could be contacted for obtaining further information on its public service programs. The major survey findings are presented below.

A. Technical Assistance Provided to Business and Community Groups: In the survey, the colleges and universities were asked to identify the type of technical and other assistance their institutions provide to community organizations engaged in promoting economic development. The responses indicated that most institutions provide a wide range of assistance to meet diverse business and community needs. In fact, one can almost always find the needed expertise on any subject at one or another institution in the region. Most colleges and universities have created special institutes, centers, and units within certain offices which work closely with outside groups to determine the specific community and business needs and then develop strategy to meet those needs. The services provided by the colleges and universities to outside groups including businesses can be grouped in the following broad categories:

•**Local and Regional Economic Development:** Assistance provided includes: small business assistance; entrepreneurship development; international trade and investment assistance (especially dealing with Canada); total quality management; technology transfer and product development; internet and computer assistance; feasibility and marketing studies; environmental, social and economic impact studies; agricultural and forestry management; tourism promotion, and, finally, rural development and planning strategies.

• **Workforce Development:** Assistance provided includes: conducting training workshops and seminars for the employees of small and large businesses as well as for the employees of public sector agencies. Topics generally covered

include: managerial and supervisory skills, managing organizational change, Quality control, team building and communication, computer skills, stress and time management, enhancing productivity, affirmative and diversity issues. Several institutions also offer credit and non-credit courses designed specifically for the employees of local businesses to provide them with special skills and knowledge so that they can function more effectively in their jobs.

• **Health Care and Social Services:** Assistance provided includes: emergency medical technicial training, in-service training programs for heath care professionals, health education, hospices, social services staff training, counseling and training to welfare recipients to enable them to enter the job market.

• **Public Education:** Assistance provided includes: linkages between higher education and secondary and primary education, training programs for teachers and school administrators, and continuing education programs for the general public through non-credit courses. Most institutions extend the library use priviliges to outsiders. In addition, the public is often invited to art exhibits, music and dance performances, and other campus events.

• **Local Government:** Assistance provided includes: organizing local government conferences, teleconferences on local government issues, analysis of government revenues and expenditures and delivery of public services, planning and zoning, and other community development issues.

• **Campus Facilities:** All campuses make their physical facilities available to outside community groups for holding conferences, workshops, seminars and meetings. Almost all campuses have established guidelines for the use of campus facilities. Most campuses do charge a nominal fee for the use of these facilities.

Through the provision of these services, the NNY colleges and universities play a vital role in promoting rural development of the region. According to the estimates prepared by the SUNY Office of Economic Development, during the year 1994-95, the fourteen publicly-funded colleges and universities in NNY provided workforce development training to about 6000 employees, were involved in creation of 500 new jobs and in retention of 700 employees and in generation of new business investment of about $10 million.[7] While similar estimates with respect to the contributions made by private colleges and universities to workforce development, job creation and retention, were not available, we do know that these institutions make significant contributions to strengthening the local and regional economic base. Collectively, all NNY institutions of higher education are closely linked with the region's economic well being, and each one is an important player in that respect.

However, it must be kept in mind that the primary mission of the colleges and universities is to educate students and to further the frontiers of knowledge. They are not economic development agencies. But they do have the resources and

knowledge which they can share with outside community groups. In doing so, the educational institution cannot and must not compete with or duplicate the efforts of outside groups. Their role should be to provide needed technical assistance to enhance the effectiveness of community organizations engaged in rural development. Each institution will need to set its own priorities and determine its proper role in meeting the community and business needs.

B. Community Organizations Using Public Service Activities: Using a scale of 5 to 1 (with 5 as the most important and 1 as the least), the institutions were asked to rank order the organizations and agencies which made most use of their community service programs. Table 3 summarizes their responses (not all twenty responded to every question). The table also includes a cumulative score for each organization.

TABLE 3: ORGANIZATIONS USING PUBLIC SERVICE ACTIVITIES

	5	4	3	2	1	Cumulative Score
Local governments	11	0	5	3	1	77
Businesses	8	6	3	2	1	78
Econ. development	6	6	5	0	2	71
Social services	8	5	6	1	0	80
Secondary education	8	6	3	3	0	79
Art, music, cultural	1	7	4	6	2	59
Environmental	3	5	8	2	2	65
Tourism	3	5	6	5	1	64
Health services	5	7	7	0	1	75
Agri, forestry, dairy	2	2	5	6	5	50
State government	6	2	5	5	2	65

* Numerical ratings given by the institutions to each area were added together to develop cumulative scores. For example, the cumulative score for "local government" was calculated by adding (11 x 5) + (0 x 4) + (5 x 3) + (3 x 2) + (1 x 1) = 77.

Based on the cumulative scores, the organizations and agencies can be divided into three groups. Group I consists of organizations with a cumulative score of 70 and above. These organizations make the most use of community service programs which include local governments, businesses, economic development agencies, social services departments, secondary education, and health services organizations. Group II consists of organizations with scores between 60 and 70 which appear to make slightly less use of public service programs. These organizations are involved in environmental, tourism and state governmental concerns. Group III consists of organizations with cumulative scores of less than 60. They make even less use of public service programs and include art, music, cultural, agriculture, forestry and dairy organizations.

It should be noted, however, that the above groupings are based on cumulative scores which should be interpreted with care. It is quite possible that an

organization included in Group III may, in fact, make the most use of a *particular* institution's public service programs. For example, agriculture, forestry, and dairy organizations receiving the lowest cumulative score of 50 may actually be the most important user of the services offered by Paul Smith's College and/or SUNY Environmental Science and Forestry College. Similarly, an organization included in Group I may make the least use of an institution's programs (e.g., Wadhams Hall). It can be stated, nevertheless, that no single category of organization emerges as the dominant user of community service programs. This is, of course, not unexpected given the fact that most of the institutions within the NNY region offer a wide variety of services and tend to meet the needs of more than one type of organization.

C. Geographic Focus of Public Service Programs: Using a scale of 5 to 1, the campuses were asked to rate the geographic focus of their public service programs. Table 4 summarizes the survey responses (not all twenty campuses responded to every question).

TABLE 4: GEOGRAPHIC FOCUS OF PUBLIC SERVICE ACTIVITIES

	5	4	3	2	1	Cumulative Score*
Local	16	4	0	0	0	96
County	11	5	2	0	0	81
NNY	5	5	8	2	0	73
NYS	3	3	4	6	4	55
International	3	1	3	3	9	43

The results clearly indicate that local communities are the primary focus for almost all the institutions, followed by the county in which they are located. It is generally recognized that economic development activities undertaken by most rural educational institutions are geared toward meeting the local or regional needs. Our survey responses confirm this perception. Larger and specialized institutions, as well as those located in bigger cities, tend to have a much broader geographic focus. For example, SUNY Environmental Science and Forestry College, as a specialized institution, provides its services to the entire state and, in some cases, to the country and the world.

D. Organizational Structure for the Delivery of Services: Administrative structures for the delivery of public service vary among the institutions. These activities are generally carried out by several departments at each campus. Survey responses indicate a great degree of decentralization in the development and delivery of public service programs. In one sense, this may be healthy as public service needs are often unpredictable and vary from year to year. At most campuses, the office of continuing education, special institutes and centers are responsible for public service activities and enjoy considerable freedom in the delivery of their services to the community. For administrative purposes, however, these programs are often

linked to an appropriate academic or administrative structure within the college or university. Accordingly, campus presidents, vice presidents and academic deans directly and/or indirectly oversee their institution's public service activities. At most campuses, the Dean/Director of Continuing Education serves as the primary contact person with outside organizations.

E. Reasons for Public Service Activities: Why do institutions in higher education participate in public service? What factors motivate them to do so? Again, using a scale of 5 to 1, the institutions were asked to rank order six factors. Table 5 summarizes the responses and includes cumulative scores for each factor as well.

TABLE 5: REASONS FOR PUBLIC SERVICE ACTIVITIES

	5	4	3	2	1	Cumulative Score
Enhances reputation	11	4	4	1	0	85
Generates support	13	1	5	1	0	86
Helps in raising external funds	1	7	7	4	1	63
Strengthens academic mission	9	7	4	0	0	85
Professional/moral obligations	8	8	3	1	0	83
Pressure from local community	1	3	6	3	7	48

Institutional rating of each factor and cumulative scores clearly indicate that no single factor emerges as the dominant reason for institutional involvement in public service. In fact, it appears that the four factors (enhances public reputation, generates public support, strengthens academic mission, and professional/moral obligations) which received almost identical cumulative scores underlie an institution's involvement in public service. Raising external funds, while important, clearly does not appear to be the primary reason for undertaking public service programs.

It is worth pointing out that only one institution rated "pressure from the local community" as the most important reason for its involvement. Overall rating of this factor, however, is the lowest. Obviously, while institutions of higher education engage in public service for a variety of reasons, the least influential among those is their being subjected to pressure from their communities.

F. Factors Inhibiting Public Service Activities: Institutions were asked to identify the factors which inhibit their involvement in public service by rank ordering the following six factors on a scale of 5 to 1. The results are presented in Table 6 with cumulative scores for each factor.

TABLE 6: FACTORS INHIBITING PUBLIC SERVICE ACTIVITIES

	5	4	3	2	1	Cumulative Score
Conflict with mission	1	0	2	1	16	29
Lack of resources	9	4	6	0	1	80
Lack of faculty/staff interest	0	3	6	7	4	48
Lack of leadership support	0	1	2	2	15	29
Lack of public support/appreciation	0	0	2	4	14	28
Bureaucratic obstacles/lack of flexibility	4	2	3	3	8	51

Lack of resources is clearly identified by most institutions as the major inhibiting factor. Only one institution listed it to be the "least" inhibiting factor while nine institutions rated it as "most" inhibiting. This type of response is not surprising. Most educational institutions, both public and private, have recently confronted severe budgetary problems and, accordingly, have had a difficult time even to adequately fund their primary missions of teaching and research. In times of budgetary crises, public service programs often become the target for cutbacks since these are not considered the primary or core of the institution's mission.

The other two factors identified as inhibiting public service activities are bureaucratic obstacles/lack of flexibility (cumulative score of 51) and lack of faculty/staff interest (cumulative score of 48). While the cumulative scores for these two factors are very similar and may appear to be almost equally inhibiting, closer analysis of individual responses indicates that bureaucratic obstacles/lack of flexibility is considered a much more inhibiting factor than lack of faculty/staff interest. For example, four institutions have rated bureaucratic obstacles/lack of flexibility as the "most" inhibiting factor while no institution indicated lack of faculty/staff interest as "most" inhibiting.

This contrast in ratings is quite interesting. Speculatively, bureaucratic obstacles/lack of flexibility seems to be a serious barrier especially for public institutions because of the many regulations to which they are subjected. For example, the vast amount of paperwork required to get approval for new initiatives and the record-keeping requirements are often time-consuming and frustrating. Private institutions, while not totally free from these regulations, do enjoy greater flexibility in planning and executing their public service programs.

The lack of faculty and staff interest in public service activities has often been attributed to lack of clarity concerning the role of involvement in these activities in the reward structure of an institution. It has been observed that most faculty and staff generally believe that public service activities do not count much in personnel policy decisions (promotion, tenure, reappointment, etc.). Several institutions, in their responses, mentioned that they were in the process of clarifying the role of public service activities in their campus' reward structure. Perceptions of public

service activities playing a lesser role in personnel decisions relative to teaching and research, however, are hard to overcome.

G. Faculty and Staff Expertise: Each institution was asked to identify ten to twelve faculty and staff members who were actively involved in rural development effort and to list their areas of expertise. This information was requested so that a directory of resource persons could be prepared for use by development organizations. Some campuses (e.g., Fulton-Montgomery Community College, SUNY Institute of Technology at Utica/Rome and Herkimer County Community College) publish a directory containing the names of faculty and staff along with their areas of expertise. These directories, updated periodically, are made available to community organizations and to others interested in using an institution's resources. At institutions where such directories do not exist, one can obtain the names of faculty and staff along with their relevant expertise by contacting the office of college relations or the academic deans.

Needless to say, the faculty and staff at the NNY educational institutions constitute an extremely rich resource for the region. Because of the diverse nature of these institutions, one can find faculty expertise in almost every conceivable area at one or another of the institutions. Examples of such expertise include: engineering; business administration; nursing and health; social sciences; computer programming; physics and other natural sciences; humanities; art and music; teacher education; environment and forestery management; and hotel and tourism management. The NNY institutions have over 8,000 employees, forty to fifty percent with Ph.D.s (or other terminal degrees) and another twenty to twenty-five percent with master's degrees.

Thus, the region has a pool of highly qualified and talented people whose knowledge can be tapped for the development and enrichment of the region. In fact, if one were to extend this further, almost all other employees have a college degree of some type. Even the spouses of most college employees have some college education. The survey responses clearly indicate that every institution has a large group of faculty and staff interested in assisting their communities.

H. College and Community Interaction: The survey responses indicate a high degree of interaction between institutions of higher education and their communities. The "town and gown" relationship is alive and well in the NNY region. College and/or university people are involved in almost every facet of community life. In return, many community people share their expertise by serving in advisory roles to various college and/or university programs.

Individuals employed by the NNY colleges and universities serve their community and the surrounding region as members of various organizations. They serve on boards of education, public school committees, literacy organizations, hospital and hospice boards, village and county planning boards, economic development corporations, cultural organizations, civic organizations (Rotary,

Kiwanis, Lions, etc.), religious organizations, and various political as well as social service organizations. In many cases, they serve in leadership positions, often as chair or president. Because of their qualifications and experience, they enrich the work of these organizations. College employees sometimes even run for political office.

Professor James Dawson of SUNY Plattsburgh serves as a regent on the New York State Department of Education's Board of Regents. The Chair of the St. Lawrence County Planning Board is a member of Clarkson University's staff, the District Governor of the Lions Club comes from Canton College of Technology, the Chair of the Clinton County Legislature is from SUNY Plattsburgh, the President of the Utica Chamber of Commerce is from Utica College of Syracuse University, the Chair of the Montgomery County Task Force on Ethics is from Empire State College, the President of the Greater Oswego Chamber of Commerce is from SUNY Oswego and the President of the United Way of the Mohawk Valley is from Herkimer County Community College. Professor Peter FitzRandolph of St. Lawrence University serves as an elected member of the St. Lawrence County Legislature. Most college/university presidents offer their time and expertise by serving as members of several governing boards of profit and/or non-profit organizations in their areas. By making themselves available to serve on local committees and boards in a voluntary capacity, the college/university people make significant contributions to improving the quality of life of the community.

The colleges/universities also call upon community people for their advice and expertise. Our survey results show that many institutions have community people who serve in advisory capacities on various academic and other programs. Individuals from the community can be found on committees and boards including colle or university foundation boards, curriculum committees, public service committees, medical laboratory technology committees, criminal justice advisory committees, and holiday fund committees. Survey responses indicate the number of community people involved varies from a low of 80 (Wadhams Hall) to a high of 250 (Canton College of Technology, Utica College of Syracuse University and SUNY Potsdam). Through this linkage, the college/university gains rich insights from the expertise of individuals from the community.

I. Consortia and Inter-Institutional Cooperation: Institutions were asked to indicate if they were members of any rural development consortia or any other cooperative arrangement which involved other educational institutions, public schools, local and regional organizations in NNY. Several institutions responded affirmatively. Summarized below are selected responses.

- **Great Lakes Research Consortium:** designed to improve understanding of the largest system of fresh water in the world involving State University College at Albany, State University College at Brockport, SUNY Buffalo, State University College at Buffalo, Clarkson University, SUNY ESF and State University College at Oswego.

• **Fort Drum Consortium:** designed to meet the educational needs resulting from the expansion of Fort Drum (10th Mountain Army Division) through extension services offered by SUNY Potsdam, Jefferson Community College, State University College at Oswego, SUNY Institute of Technology at Utica/Rome, Empire State College and SUNY ESF.

• **Mohawk Valley Quality Improvement Council (MVQIC):** formed to promote awareness of total quality concepts within the business community involving Mohawk Valley Community College and three other colleges.

• **Northern Advanced Technology Corporation (NATCO):** designed to promote economic development in and around Potsdam involving SUNY Potsdam, Clarkson University, the Town and Village of Potsdam and St. Lawrence County.

• **Council for International Trade, Technology, Education and Communication (CITTEC):** created to encourage regional economic development through high technology and international business involving SUNY Potsdam, Clarkson University, economic development organizations in the six counties of the North Country.

• **Tech Prep Program:** designed to encourage high school students to consider continuing their education in technical programs at northern New York two-year colleges, such as Canton College of Technology and other two-year colleges.

• **Associated Colleges of the St. Lawrence Valley:** created to share resources among the four colleges; publishes a newsletter with activities at SUNY Potsdam, Clarkson University, Canton College of Technology and St. Lawrence University.

• **Liberty Partnership:** mentoring and counseling at-risk high school students to encourage them to finish high school and continue their education involving area high schools, Canton College of Technology, SUNY Potsdam, Clarkson University and St. Lawrence University.

• **North Country Consortium:** formed to encourage work on joint projects, particularly the economic impact of the Canada-U.S. Free Trade Agreement on the North Country, among SUNY Plattsburgh, SUNY Potsdam, Clarkson University and St. Lawrence University.

Most of the consortia and cooperative arrangements among the NNY institutions described above were developed over the recent past. This indicates a healthy trend, especially in this era of specialization and growing demand for services. Faced with hard fiscal realities, institutions of higher education are now taking a more pragmatic approach to the formation of consortia and other cooperative arrangements. In the process, everyone wins. However, developing such alliances and partnerships requires considerable give and take. The members of any cooperative endevour must rise above parochial interests and attitudes, and an astute and determined leadership is necessary for these efforts to succeed.

IV. Economic Impact of the Colleges and Universities:

Colleges and universities, like other businesses, create direct and indirect employment and spending impacts in their local economies. The magnitude of the direct expenditure impact depends upon the purchases made locally by the institution, its employees, students and visitors. In general, for a rural region, the local economy is defined as the county within which a college or university is located. To the extent these college entities buy goods and services from outside the local economy (the county), the magnitude of a college's direct expenditure impact is reduced due to what economists call leakages. The indirect expenditure impact is based on the concept of the multiplier effect which indicates that every $1 of direct local spending creates a further stream of expenditures within a local economy. The magnitude of indirect spending depends upon the multiplier effect. The use of the proper multiplier is important to correctly measure the indirect expenditure impact. The total economic impact of a college is the sum of the direct and indirect expenditures. Estimating the economic impact of a college requires careful analysis of the local expenditures incurred by various entities within the college and use of the proper multiplier.

In the survey, colleges and universities were asked to indicate the magnitude of their economic impact. More than half of the NNY institutions had conducted such a study. In reporting these campus estimates, no attempt was made to examine the methodology used. It is possible that two campuses located in the same county used different multipliers. Thus, the economic estimates may not be comparable among the campuses. For the institutions which did not conduct such a study, estimates of their annual operating budget and the number of full-time equivalent staff and FTE students enrolled are given. One can get some indication of the size of the economic impact from these data. Table 7 presents the estimates of economic impacts of selected institutions.

TABLE 7: ECONOMIC IMPACT OF SELECTED INSTITUTIONS

Institution	Total economic impact (in millions of dollars)
Adirondack Community College	37.3 (1994-95)
Canton College of Technology	33.0 (1995-96)
Clarkson University	57.0 (1989-90)
Clinton Community College	26.0 (1995-96)
Fulton-Montgomery Community College	15.6 (1995-96)
Herkimer County Community College	41.3 (1995-96)
Jefferson Community College	35.9 (1990-91)
Mater Dei College	8.32 (1994-95)
Mohawk Valley Community College	76.0 (1994-95)
North Country Community College	18.6 (1994-95)
Paul Smith's College	48.0 (1995-96)
St. Lawrence University	31.8 (1989-90)

SUC Environmental Science and Forestry	50.0 (1995-96)
State University Institute of Technology	87.2 (1995-96)
State University College at Oswego	132.2 (1994-95)
State University College at Plattsburgh	139.0 (1994-95)
State University College at Potsdam	71.7 (1995-96)
Utica College of Syracuse University	57.8 (1995-96)

V. Guidelines for a Successful Community Assistance Program

What are the key requirements for developing a successful community service program? My own involvement in the community service activities through our college's Merwin Rural Services Institute as well as my experience of working with other colleges and universities in NNY have provided me with a somewhat unique perspective from which to view both the academic world and the outside community. The following guidelines are based on that perspective.

* **Presidential commitment and leadership:** Institutional commitment to meet community and business needs must come from the campus president and filter through the academic and administrative structure within the institution. This commitment must be real. This is the most important prerequisite for the success of any community service program. To ensure its actual happening, the campus president's job description and job performance must include his/her providing genuine support to community service activities. Let me repeat, a strong and determined presidential leadership can greatly help overcome many barriers in developing a meaningful service program.

* **Provide need-based services and establish a special niche:** Developing a proper match between community and business needs and what an institution can do to meet those needs is an essential first step. An institution must assess its capabilities and make the community aware of the types of assistance it can actually provide. It should focus on those activities where it can have the most impact and maintain its credibility and standards of high quality. An institution should publish a clear statement of its policy and approach to community service, including any fees and other charges, to avoid confusion.

* **Create a central office to coordinate community service:** Most institutions have special centers and institutes to meet business and community needs but lack any central office to coordinate the delivery of those services. I believe this is a major handicap. Lack of such a central office leads to confusion and unfocused efforts. Similarly, outside groups needing assistance often do not know where and whom to call at the institution. One possible name for this coordinating office is the "center for business and community service." Over time, this office will become identified with coordinating the delivery of the college's community service, a place where businesses and community groups needing assistance could call. This office will become a hub and the single contact point for community service in the institution.

* **Provide adequate funding:** In the survey, lack of funding was identified as a major barrier by most NNY institutions for not being able to do more in assisting community groups. My own experience shows that over time, most business/ community service activities become self-financing through grants, contracts, and registration and consulting fees. However, an institution would need some regular funding to support community service programs as well as to staff a central coordinating office. Most campuses allocate a very tiny portion of their budgets in this area. During times of financial exigency, these programs are often the first to experience cutbacks.

Uncertainty in the level of funding and support often leads to instability and inconsistency in the quality and magnitude of community assistance provided. Community service is a serious commitment. It requires adequate funding and institutional support like any other activity on a campus. These funds must be targeted to meet community development needs and must not be diverted to any other use.

However, funding by itself may not lead to a sound community assistance program. It is just a means and not an end. An institution must have an action plan indicating where and how these funds will be used to enhance business and economic development in the region.

* **Link community service with learning**: Community service programs, when properly structured and delivered, enrich the institutional mission of teaching and research. They provide a real world experience for faculty and students and an avenue for empirically testing the theories and models taught in classes. Faculty can be encouraged to link their teaching and research with community service by providing incentives in terms of public recognition and awards. Our survey findings indicate that institutions which have worked to link community service with their missions of teaching and research, have, in general, more effective public service programs.

* **Minimize duplication of effort through promoting partnerships:** An institution should coordinate the delivery of its community service with businesses and development organizations including neighboring colleges and universities by promoting partnerships to minimize duplication of efforts. Services provided should complement, and not compete with, outside organizations engaged in similar endeavors. Services provided should be mutually beneficial to all parties.

* **Be non-partisan:** An institution must remain objective in working with organizations it assists and in delivery of its community services. One reason institutions of higher education enjoy high prestige is because the public perceives them to be non-partisan, reasonably objective entities. This must be preserved.

* **Persistence and patience can be critical virtues:** Community service needs are almost unending. The needs are often unpredictable and vary in nature and scope from year to year. Institutions must understand the unique characteristics of community service needs and must show abundant patience and persistence in dealing with them. This understanding is even more critical for those institutions located in rural communities.

* **Conduct periodic review and evaluation:** Since community and business needs change frequently, it is important that the institution conduct periodic review and evaluation of its outreach activities. It should examine their effectiveness to ensure optimal use of its resources.

* **Be cognizant of special rural needs:** Developing a sound community service and learning program for any college or university is always a challenging task. However, this task is even more challenging for institutions located in rural communities. Rural communities face a different set of economic and social problems and place different demands on institutions of higher education than those in urban areas. Most rural communities are small in size, physically dispersed, lack public transit system, suffer from a high degree of political fragmentation, and experience out-migration of young people. Promoting rural development becomes a high priority. Unfortunately, most development organizations in rural areas are often under-funded and under-staffed. Even most elected local government officials serve part-time.

These communities, therefore, look to colleges and universities to play a leadership role in their struggle to promote economic development. They view these institutions not only as major economic and educational assets but also as adding considerable visibility and status to the rural communities in which they are located. Most often, these institutions dominate the local economy and provide direct and indirect employment to a large segment of the local population. Consequently, the colleges and universities in rural areas are expected to be more responsive and generous in sharing their resources with their surrounding communities than those located in urban centers.

Endnotes

*This paper is based on information from: Chugh, Ram L. Higher Education and Regional Development: A Compendium of Public Service Activities by Colleges and Universities in Northern New York, The Rural Services Institute, Potsdam College of the State University of New York , July 1992. Parts of the study were updated this year

1 Matthews, Jana B., and Norgaard, Rolf. *Managing the Partnerships Between Higher Education and Industry*. Boulder: National Center for Higher Education Management Systems, Inc., 1984, p. 53

2 Crosson, Patricia. Public Service in Higher Education: Practices and Priorities. Association for the Study of Higher Education, 1983, p. 23

3 American Assoc. of State Colleges and Universities (AASCU). *Public Service at Public Colleges: Mission and Management*. Washington, AASCU, 1985, p.11

4 American Assoc. of State Colleges and Universities (AASCU). *The Higher Education-Economic Development Connection: Emerging Roles for Public Colleges and Universities in a Changing Economy*. Washington, AASCU, 1986, p.ix

5 SUNY Office of Economic Development. *Partners in Economic Development*. Albany, SUNY, 1992

6 SUNY. SUNY 2000. Albany, SUNY, 1991, p. 3, italics mine

7 This information was obtained over phone from the SUNY Office.

APPENDIX A: Areas of Institutional Strength in Public Service

Adirondack Community College

- SCORE (Service Corps of Retired Executives)
- Business Industry Center
- Canadian-American Business Association

Canton College of Technology

- Management Education and Training
- Small Business Assistance
- Emergency Medical Technician Training
- Real Estate Training
- Rural Enterprise Alternatives
- Industrial Training in computer numerical controls, CAD/CAM and Industrial Motor Controls
- Automotive Technician Education

Clarkson University

- New York State Center for Advanced Materials Processing at Clarkson University
- Center for Canadian-U.S. Business Studies
- Center for Leadership & Entrepreneurial Development
- Entrepreneurial Consulting Group
- Clarkson Space Grant Program
- Hazardous Waste and Toxic Substance Research and Management Center
- Institute for Nonlinear Studies
- Institute for Statistical Physics
- International Center for Gravity Materials Science and Applications
- Internet Consulting Group
- Microcontamination Research Laboratory
- Polymer Processing Laboratory
- School of Business Partnership Program
- Small Business Consulting Service
- Workshop System Development Course

Clinton Community College

- Small Business assistance
- Local Government Assistance
- Social Services Assistance
- Health Services Assistance
- Computer Assistance
- Educational/Training Programs

Empire State College

- Regional Health Planning
- Environmental Analysis and Planning
- Social Services Planning for the Disabled
- Training and Other Programs for Work Force Development

Fulton - Montgomery Community College

- Flexibility in Meeting Area Business and Industry Training Needs
- Technical Information and Expertise (combined with knowledge of local conditions)
- Training Programs in: team building, quality assurance, computerization, manufacturing techniques, and safety.

Herkimer County Community College

- Business Assistance
- Management training
- Tourism training
- Social Service Staff Development
- Arts and Crafts Programming
- Seniorversity

Jefferson Community College

- Small Business Development Center's assistance to local entrepreneurs
- Madison Barracks Training Site (dedicated instructional kitchen and small conference facilities)
- Satellite Teleconferencing

Mater Dei College

- Social Services (Parenting Workshops)
- Health Services (opticiary, alcohol/dependency counseling)
- Environment (zebra mussel research, recycling, conservation activities)

Mohawk Valley Community College

- Economic Development Assistance
- Social Services Assistance
- International trade/investment Assistance
- Technological Transfer

North Country Community College

- Small Business Assistance
- Social and Health Services
- Computer Assistance (PC)

Paul Smith's College of Arts and Sciences

- Environment
- Forest Management

- Urban Tree Management
- Hospitality
- Tourism
- Culinary Arts

St. Lawrence University

- Canadian Relations
- Environmentalism/ecosystems
- International Economic Relations
- Outdoor Education

State University College of Environmental Science and Forestry

- International Environmental Studies
- Forestry, Soil, and Water Studies
- Wildlife, Fisheries, Great Lakes, Ecology
- Wood products Engineering, Materials, Preservation, and Coatings
- Environmental Chemistry, Polymers
- Paper Science and Engineering
- Forest Engineering, Water Treatment, Waste Water Management
- Hazardous Materials Handling and Management
- Landscape Architecture, Wetlands Identification and Management
- Environmental policy, Communication, Regulations

SUNY Institute of Technology at Utica/Rome

- Management Assistance Center
- Gannett Gallery
- Library
- Technology Policy Center
- Small Business Development Center
- Small Business Institute
- Community Forum (local issues television program)

SUNY Oswego

- Business Industry Center
- CITT - Center for Innovative Technology Transfer
- Total Quality Management - through Business Administration department
- Education specialists at both undergraduate and graduate level

SUNY Plattsburgh

- Technical Assistance
- International Business Center
- Environmental Issues
- Canadian Studies Center

SUNY Potsdam

- Music, Performing, and Fine Arts
- Public Education
- Computer Assistance
- Economics and Labor Relations Research
- Seismic Network
- Merwin Rural Services Institute
- Reading Clinic
- Adirondack Audiology (Hearing Center)

Utica College of Syracuse

- Gerontology Education
- Clinical Medical Education

Wadhams Hall Seminary College

- Social Services
- Religious Education